Oregon

DEPARTMENT OF
ENVIRONMENTAL
QUALITY

August 12, 1991

Regional Administrator
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, WA 98101

Re: TMDL Submittal Bear Creek

In accordance with 40 CFR 130.7(d) and section 303(d) of the Clean Water Act (33 U.S.C. 1251 et. seq.), the Oregon Department of Environmental submits for your review and approval the TMDL and associated WLAs and LAs for Bear Creek as being established at a level necessary to meet the applicable water quality standards for with consideration of seasonal variation and a margin of safety. The TMDLs establish levels for phosphorus to limit periphyton growth to limit the pH standards violations, Ammonia nitrogen to limit toxicity, Ammonia Nitrogen and Ultimate BOD to limit the summer season Dissolved Oxygen Violations. The ultimate BOD for winter conditions is intended to prevent an increase in oxygen demand during the winter until the cause and effect of the observed winter substandard occurrences are better understood.

This TMDL was given public review (May 4, 1989) and incorporated by the States Environmental Quality Commission into the states Water Quality Management Plan. Members of your staff were kept informed of the informational meetings and public hearings for the Bear Creek TMDLs and your comments were received and incorporated into the TMDL. You therefore have the information necessary for your review at your disposal. However, we are attaching a copy of the staff reports which identify the process for distributing preliminary allocations and implementing the TMDL.

As you are aware the Department has adopted a phased process for implementing the TMDLs and reviewing associated allocations and management strategies. We are glad to see that the EPA guidance for Water Quality Based decisions (April 1991) contains a similar phased approach and feedback loops as used in Oregon.

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(503) 229-5696

The implementation schedule for the Bear Creek TMDL has been modified based upon further evaluation. Additional monitoring and data evaluation has been conducted on Bear Creek. Point source facilities plans are being developed by Ashland, the major municipal discharger, and multiple log pond dischargers with general permits. The local council of governments, municipalities, and the Department of Agriculture are developing nonpoint source program plans. This information will be incorporated into the Departments review and analysis of options presented in facilities plans and alternative allocation strategies.

Sincerely,

Lydia R. Taylor
Administrator
Water Quality Division

LRT:RB:crw
SA\WC8\WC8817

SCHEDULE A, Section 1

Pollutant Discharge Limits not to be Exceeded

1. Pollutant Discharge Limitations not to be exceeded prior to implementation of controls. (Interim Limits based on existing conditions prior to implementation of controls.)

MONTHLY AVERAGE BOD(5) LOAD ALLOCATIONS
November 1 - April 30
(pounds per day)

Flow Estimates used for Interim TMDL in cubic ft/sec

Est. Flow Ashland	<30*	30-40	40-60	60-80	80-120	>120	
Flow at Medford	<60	60-80	80-120	120-160	160-240	240-400	>400
Est. Flow Kirtland Rd.	<90	90-120	120-160	160-240	240-360	360-600	>600

Source Number	Source Description	BOD_5 Loads in lbs/day by Source and Flow**						
001	BKG + NPS	646	969	1293	1670	2586	3891	7185
002	Ashland STP	150	225	300	450	600	700	700
003	Log Pond	3	4.5	6	9	12	65	225
004	Log Pond	3	4.5	6	9	12	65	225
005	Log Pond	3	4.5	6	9	12	65	225
006	Log Pond	3	4.5	6	9	12	65	225
TMDL (Interim)		808	1212	1617	2156	3234	4851	8085
Loading Capacity		808	1212	1617	2156	3234	4851	8085

* Loads for <30, <60, and <90 cfs calcualted at 20, 40, and 60 cfs respectively.

** Loads based on flows shown in columes above.

NOTES:

a. The Loading Capacity of Bear Creek is based on attaining a winter seasonal median instream concentration of BOD(5) of 2.5 mg/l as measured at Kirtland Road. This value is equal to the long term median as measured at Kirtland Road. The TMDL is designed to prevent additional excessive loads until such time that the observed winter period dissolved oxygen violations are more fully addressed.

TOTAL MAXIMUM DAILY LOAD

WATER QUALITY MANAGEMENT PLAN COMPONENT

Department of Environmental Quality
811 Southwest Sixth Avenue, Portland, OR 97204
Telephone: (503) 229-5696

Developed pursuant to ORS 468.730 and The Federal Clean Water Act

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WATER QUALITY LIMITED SEGMENT:

Bear Creek (RM 0 - 22.4)
(Winter)

RECEIVING SYSTEM INFORMATION:

Basin: Rogue
Subbasin: Bear Creek
County: Jackson

WQ STANDARD NOT ATTAINED:

Dissolved Oxygen

APPLICABLE RULES:

OAR 340-41-362
OAR 340-41-365(A)
OAR 340-41-375(c)

TMDL PARAMETER:

Biochemical Oxygen Demand

OAR 340-41-006

SOURCES COVERED BY THIS TMDL:

Source Number	Allocation Type	Source Description
001	LA	Background + NPS
002	WLA	Ashland Sewage Treatment Plant
003	WLA	Log Pond
004	WLA	Log Pond
005	WLA	Log Pond
006	WLA	Log Pond

WATER QUALITY MANAGEMENT ACTIVITIES AND IMPLEMENTATION

Until this TMDL is modified, point source permits will be reissued as they are re-opened or expire to include limits for complying with the established waste loads. Where reduced limits are needed, compliance schedules will be specified for reaching those limits. Nonpoint sources will be addressed through specified schedules for developing and implementing needed control programs. All requirements, limitations, and conditions are set forth in the attached schedules as follows:

SCHEDULE B

Recommended Monitoring and Reporting Requirements
(final requirements will be established by permit)

1. Source Monitoring. The following source monitoring program shall be conducted by the Ashland STP to describe wasteloads being discharged to the Bear Creek:

Source	Parameter	Minimum Frequency	Type of Sample
Ashland STP (Outfall 001)	Total Flow (mgd)	Continuous	Recording
	Ammonia Nitrogen	Daily	Composite
	BOD(5)	Daily	Grab
	Total Kjel. Nitrogen	Weekly	Composite
	NO_2+NO_3-N	Weekly	Composite

On-going long pond monitoring requirements will be developed pursuant to program plan review.

2. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 unless other test procedures have been approved by the Department.

3. Reporting Procedures. Monitoring results shall be reported on approved forms. The reporting period is the calendar month. Reports must be submitted to the Department by the 15th day of the following month.

b. Loading capacities are divided into several hydrologic categories as requested by the local advisory group. A flow of 400 cfs is exceeded 5 percent of the time annually (USGS). Monthly average flows (USGS) for Bear Creek at Medford are:

November	59 cfs	February	223 cfs
December	147 cfs	March	202 cfs
January	221 cfs	April	197 cfs

c. Load allocations for log ponds were calculated with limited discharge data from Boise Cascade used to develop a cumulative frequency discharge load. It was assumed that similar loads were discharged from the other log ponds. Based on this assumption, the allocations are evenly divided amongst all log pond dischargers. The Department recognizes that modifications of loads and allocations may be necessary upon receipt and review of the required program plans.

d. Log pond dischargers include:

Name	Permit	Receiving Stream
Boise Cascade	NPDES	Elk Creek.
KOGAP	General	Hansen Cr.
MEDCO Timber Products	General	Bear Creek.

by 4.35 and added to the measured effluent biochemical oxygen demand.

[2] Median value as measured at the Kirtland Road sampling site.

* Precise dates for complying with this rule may be conditioned on physical conditions, such as flow and temperature, of the receiving stream and shall be specified in individual permits or memorandums of understanding issued by the Department.

(b) The Department shall before September 30, 1990 ~~within 60 days of adoption of these rules~~ distribute initial waste load and load allocations to point and nonpoint sources in the basin. These loads are interim and may be redistributed upon conclusion of the approved program plans.

(c) Before October 21, 1989 ~~Within 90 days of adoption of these rules~~, the City of Ashland shall submit to the Department a program plan and time schedule describing how and when they will modify their sewerage facility to comply with this rule and all other applicable rules regulating waste discharges.

(d) Before May 25, 1991 ~~Within 12 months of adoption of these rules~~, the industries permitted for log pond discharge, Boise Cascade Corporation, Kogap Manufacturing Company, and Medford Corporation shall submit program plans to the Department describing how and when they will modify their operations to comply with this rule and all other applicable rules regulating waste discharges.

(e) Before June 1, 1992 ~~Within 18 months after the adoption of these rules~~, Jackson County and the incorporated cities within the Bear Creek subbasin shall submit to the Department a program plan for controlling urban runoff within their respective jurisdictions to comply with these rules.

(f) Before June 1, 1992, ~~Memorandums of Agreement developed following adoption of this rule between~~ the Departments of Forestry and Agriculture ~~and the Department of Environmental Quality~~ shall submit to the Department ~~require that~~ program plans for achieving specified load allocations of state and private forest lands and agricultural lands respectively ~~be developed within 18 months of rule adoption~~.

(g) Program plans shall be reviewed and approved by the Commission. All proposed final program plans shall be subject to public comment and hearing prior to consideration for approval by the Commission.

SCHEDULE C

Compliance Conditions and Schedules

1. Programs plans shall be submitted in accordance with OAR 340-41-385.

2. Log pond permittees shall conduct such studies as are necessary to characterize their discharge to Bear Creek or its tributaries and include this information in the program plans. At a minimum, this monitoring shall describe the frequency, duration and quantity of discharge, rainfall conditions that generate discharge, and the quality of the discharge. The discharge quality parameters monitored shall include, but not be limited to five-day BOD and total settleable solids.

3. The distribution of WLAs and LAs will be reviewed and reassessed based on information received in the plans submitted by the permittee. Final compliance conditions will be defined by permit.

SCHEDULE D

Special Conditions

1. A annual assessment report shall be prepared by the City of Ashland which describes the effectiveness of their point source control programs towards attaining water quality standards in Bear Creek. This report shall be submitted to the Department by January 1 of each year, beginning in 1992, for incorporation into the statewide water quality assessment.

2. The winter BOD TMDL will be reviewed using information received in plans submitted by the permittees.

OREGON ADMINISTRATIVE RULES
340-41-385

NOTE:

The underlined portions of text represent proposed additions made to the rules.

The [bracketed] portions of text represent proposed deletions made to the rules.

SPECIAL POLICIES AND GUIDELINES

340-41-385

(1) In order to improve water quality within the Bear Creek subbasin to meet existing water quality standards for dissolved oxygen and pH, the following special rules for total maximum daily loads, waste load allocations, load allocations, and program plans are established.

(a) After the completion of wastewater control facilities and program plans approved by the Commission under this rule and no later than December 31, 1994, unless otherwise modified by program plans no activities shall be allowed and no wastewater shall be discharged to Bear Creek or its tributaries without the authorization of the Commission that cause the following parameters to be exceeded in Bear Creek:

Low-Flow Season
Approximately
May 1 through November 30*

Ammonia Nitrogen Nitrogen as N (mg/l)	Instream Five-Day Biochemical Oxygen Demand (mg/l)[1]	Total Phosphorus as P (mg/l)
0.25	3.0	0.08

High Flow Season
Approximately
December 1 through April 30*

Ammonia Nitrogen Nitrogen as N (mg/l)	Instream Five-Day Biochemical Oxygen Demand (mg/l)[2]
1.0	2.5

[1] As measured at the Valley View Road Sampling Site. For the purposes of waste load allocations, the biochemical oxygen demand is calculated as the ammonia concentration multiplied